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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/675,731  | 09/29/2003  | Min-Hon Rei          | D&F-008-1P1P        | 6365             |
| 22888   | 7590        | 10/15/2004           | EXAMINER            |                  |
| BEVER HOFFMAN & HARMS, LLP<br>TRI-VALLEY OFFICE<br>1432 CONCANNON BLVD., BLDG. G<br>LIVERMORE, CA 94550 |             |                      | HAILEY, PATRICIA L  |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 1755                |                  |

DATE MAILED: 10/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |
|------------------------------|------------------------|---------------------|
|                              | 10/675,731             | REI ET AL.          |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |
|                              | Patricia L. Hailey     | 1755                |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 13 September 2004.

2a)  This action is **FINAL**.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## **Disposition of Claims**

4)  Claim(s) 1-35 is/are pending in the application.  
4a) Of the above claim(s) 1-23 is/are withdrawn from consideration.  
5)  Claim(s) \_\_\_\_\_ is/are allowed.  
6)  Claim(s) 24-35 is/are rejected.  
7)  Claim(s) \_\_\_\_\_ is/are objected to.  
8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)  All   b)  Some \* c)  None of:

1.  Certified copies of the priority documents have been received.
2.  Certified copies of the priority documents have been received in Application No. 09/777,488.
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a))

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5)  Notice of Informal Patent Application (PTO-152)  
6)  Other: \_\_\_\_\_

***Election/Restrictions***

1. Applicant's election without traverse of Group II, claims 24-35, in the reply filed on September 13, 2004, is acknowledged.
  
2. Claims 1-23 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected process of catalytic combustion (claims 1-16) and to a nonelected method of dispersing a noble metal catalyst (claims 17-23), there being no allowable generic or linking claim.

***Priority***

3. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 09/777,488, filed on February 5, 2001.

***Claim Objections***

4. Claim 35 is objected to because of the following informalities:  
The word "hydrfocarbon" in claim 35 appears to be the word "hydrocarbon" misspelled.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. **Claims 24-35 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.**

The claimed subject matter not clearly described in the Specification includes the “substrate for suspending said catalyst” recited in claim 24. The Specification does not provide any definitions or examples of what the “substrate” is.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. **Claims 24-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

Claim 24 is indefinite because what Applicants are claiming as their invention (with respect to this claim) cannot be readily determined. It appears that the “substance for a catalytic combustion” is a suspension of a catalyst comprising a

noble metal and a boron nitride support, and a material for facilitating the suspension.

Claims 25-27 are indefinite for further failing to limit the subject matter of claim 24, and/or for lacking sufficient antecedent basis. Claim 25 refers to a “catalyst according to claim 24”, and claims 26 and 27 both refer to a “method according to claim 24”. Additionally, because claim 24 is directed to a “substance for a catalytic combustion” and does not include the phrases recited in claims 25-27, these claims do not have proper antecedent basis.

Claims 28-35 are indefinite because claim 28 depends from non-elected claim 1.

Claims 32-35 are indefinite for failing to further limit the subject matter of claim 28 and for lacking sufficient antecedent basis. Claims 32-35 contain subject matter directed to a fuel and/or a hydrocarbon. Claim 28 does not contain any subject matter or any recitations drawn to a fuel.

### ***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**10. Claims 28-35 are rejected under 35 U.S.C. 102(b) as being anticipated by Jenkins (U. S. Patent No. 4,897,253).**

Jenkins discloses a catalyst system comprising from 0.01 to 5 wt. % platinum and from 1-15 wt. % chromium oxide supported on a refractory solid examples of which include boron nitride. See col. 2, lines 23-39 of Jenkins. Although Jenkins discloses the presence of chromium oxide, Applicants' claims in their present form do not exclude chromium oxide, or any other known catalytic component.

The claimed surface area is considered inherently exhibited by Jenkins, in view of Applicants' claims in their present form, and since Jenkins teaches a percentage range for platinum (which is recited in Applicants' claim 31) that overlaps that of Applicants' claimed "loading of noble metal" (claim 30),

In view of these teachings, Jenkins anticipates claims 28-35.

**11. Claims 24-27 are rejected under 35 U.S.C. 102(b) as being anticipated by von Hippel et al. (U. S. Patent No. 6,048,512).**

von Hippel et al. teach a coating dispersion comprising a member selected from the group of platinum group metals (e.g., platinum, palladium, rhodium, ruthenium, etc.) and particulate nitrides (e.g., boron nitride). See col. 2, lines 33-55 of von Hippel et al.

von Hippel et al. also disclose the employment of carrier liquids for preparing the coating dispersion. Examples of these include aliphatic and aromatic

hydrocarbons, esters, ketones, alcohols, and mixtures thereof. See col. 2, lines 56-63 of von Hippel et al. This disclosure is considered to read upon the claimed "substrate for suspending said catalyst".

The coating dispersion is applied to moulded (sic) bodies such as spheres, pellets, sponge-like structures, monoliths, or tubes. See col. 4, lines 15-27 of von Hippel et al. Although von Hippel et al. disclose that the "moulded items...must possess no open porous structures", von Hippel et al., it is assumed that this statement applies when the moulded bodies are reaction tubes or monoliths.

In view of these teachings, von Hippel et al. anticipate claims 24-27.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patricia L. Hailey whose telephone number is (571) 272-1369. The examiner can normally be reached on Mondays-Thursdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark L. Bell can be reached on (571) 272-1362. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group 1700 Receptionist, whose telephone number is (571) 272-1700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Patricia L. Hailey*  
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Examiner, Art Unit 1755  
October 5, 2004

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